



IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of:  
**Ronald Roscoe Bush**

Serial No.: 09/498,293

Filed: February 4, 2000

For: **Secure Encryption of Data Packets  
for Transmission over Unsecured  
Networks**

§ Attorney Docket No. AT9-97-308B

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Examiner: **John M. Winter**

Art Unit: 3621

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**APPEAL BRIEF UNDER 37 C.F.R. § 1.192**

Commissioner for Patents  
Washington, D. C. 20231

Sir:

This Brief is submitted in triplicate in support of the Appeal in the above-identified application. Please charge Deposit Account No. **09-0447** in the amount of \$330.00 for submission of a Brief in Support of Appeal. No additional fee is believed to be required; however, in the event an additional fee is required please charge that fee to Deposit Account No. **09-0447**.

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**MARY ANN HEALEY**  
Type Name of Person Signing

*Mary Ann Healey*  
Signature of Person Signing

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### **REAL PARTY IN INTEREST**

International Business Machines Corporation, the assignee of record as evidenced by the Assignment recorded at Reel 8749 and Frame 0251, is the real party in interest in the subject Appeal.

### **RELATED APPEALS AND INTERFERENCES**

No appeals or interferences known to Appellant, Appellant's legal representative, or assignee will directly affect or be directly affected by or have a bearing on the Board's decision in the present Appeal.

### **STATUS OF THE CLAIMS**

Claims 15 is pending, and stands finally rejected by the Examiner as noted in the Final Rejection dated May 28, 2003. The rejection of this pending claim is appealed.

### **STATUS OF AMENDMENTS**

An Amendment C was proposed subsequent to the Final Rejection dated May 28, 2003 for purposes of clarifying the claim language. That amendment was not entered by the Examiner as indicated in the Advisory Action dated August 13, 2003.

### **SUMMARY OF THE INVENTION**

The present invention is directed to a method of processing an electronic check. As described on page 21, lines 27 et seq. of the present application, a process of utilizing electronic checks is provided. When a customer makes a purchase, the merchant supplies a merchant's account identification and an amount to the payor through a receiving device. In response, an electronic check is generated by the customer or payor and transmitted to the merchant or payee. The merchant routes the electronic check to both the payor's bank and the merchant's bank. Payor's bank is the only place where the electronic check can be decoded. When the payor's bank receives an electronic check, the payor's bank decodes the electronic check, verifies and authenticates the check, and checks the balance of the payor's account, and electronically

forwards the electronic check, with the appended payee account information to a clearinghouse, together with a coded authorization for payment of the indicated amount to the payee. At the same time, the payee's bank receives the check, and the payee's bank marks the payee's account as pending receipt of a deposit, and forwards the check to the clearinghouse.

The clearinghouse compares the two encrypted electronic checks received from the payor's bank and the payee's bank. If they match, the clearinghouse subtracts the indicated amount from the clearinghouse account of payor's bank and adds the indicated amount to the clearing account of payee's bank. Payor's and payee's banks are notified that the electronic check has been settled and notifies payee's bank that the electronic check has been settled with the indicated amount placed in the clearing account of payee's bank. Upon receipt of the notice from the clearinghouse, the payor's bank subtracts the indicated amount from the payor's account, removes the electronic check from the payor's authorized checklist, and notifies the payor that the check has been settled. Upon receipt of the notice from the clearinghouse, payee's bank adjusts the payee's account by the indicated amount and notifies payee that the check has been settled.

The electronic banking environment of the present invention allows the current, paper-based checking system to be electronically emulated, while provided greater security than that available in the current paper process, since only the payor's bank is capable of decoding the electronic check—yet, the clearinghouse is enabled to perform the electronic financial transaction. As can be seen, this heightened security derives from the fact that, at the destination or clearinghouse where the comparison step is performed, the user or processing system cannot know the actual contents of the encrypted check. Here, the clearinghouse performs a comparison and authentication using only the encrypted checks. This significant advantage in financial transaction security and fraud prevention is not shown or suggested in the prior art. In the prior art, a user with knowledge of the encoded data is required to be located at the clearinghouse in order to implement authentication.

## **ISSUE**

Is the Examiner's rejection of claim 15 under 35 U.S.C. § 103(a) as being unpatentable over *Chang* (US Patent 5,848,400) in view of *Arnold et al.* (US Patent 4,558,176) and further in view of *Rosen* (US Patent 6,047,067) and further in view of *Merritt* (US Patent 5,475,756) and further in view of *Martin* (US Patent 6,390,362) well founded?

## **GROUPING OF THE CLAIMS**

For purposes of this appeal, claim 15 stands and falls by itself.

## **ARGUMENT**

On page three of the Final Office Action, the Examiner has rejected claim 15 under 35 U.S.C. 103(a) as being unpatentable over *Chang* (US Patent 5,848,400) in view of *Arnold et al.* (US Patent 4,558,176) and further in view of *Rosen* (US Patent 6,047,067) and further in view of *Merritt* (US Patent 5,475,756) and further in view of *Martin* (US Patent 6,390,362). That rejection is not well founded and should be reversed.

Claim 15 in the present application includes the steps of:

*comparing said encrypted first copy of said electronic check that has been transmitted over an unsecure communication link to said encrypted second copy of said electronic check that has been transmitted over an unsecure communication link; and*  
*responsive to determining that said encrypted first copy of said electronic check matches said encrypted second copy of said electronic check and that the payment authorization has been received, processing a transaction transferring funds from said payor's bank to said payee's bank.*

On page 3 of the Final Office Action, it is suggested that these elements of Claim 15 are disclosed by *Merritt* at column 7, lines 17-34 and Figure 4. In the cited column, *Merritt* teaches authentication at an ATM. The bank's host sends an encrypted user's PIN number to an ATM along with a personal security phrase. When the user enters his PIN into the ATM, the ATM encrypts it using a one-way function and compares the result with the value received from the bank's host. If they are identical, the ATM permits the transaction to proceed.

*Merritt* is teaching that the ATM receives an unencrypted version of the PIN number (from the user at the keypad) and compares it with the received encrypted PIN number. In other words, *Merritt* is teaching an ATM receiving one encrypted and one unencrypted PIN number over a secure link, and comparing them. *Merritt* is not teaching transmitting two encrypted electronic checks over an unsecure communication link and comparing them. In fact, this teaching of *Merritt* teaches away from the present invention. Therefore, *Merritt* cannot be suggesting “*comparing said encrypted first copy of said electronic check that has been transmitted over an unsecure communication link*” to “*said encrypted second copy of said electronic check that has been transmitted over an unsecure communication link*” as recited in Claim 1 because *Merritt* teaches comparing an unencrypted PIN sent from a secure link (i.e. from the keypad to the ATM processor) to an encrypted PIN send over an unsecure link.

The fact that *Martin* (see the Examiner’s suggestion to combine with *Chang* [page 3 of the Final Office Action]) teaches conducting transactions over the unsecure Internet, does not, in any way, suggest a way to modify *Merritt* (or *Chang*) to make the connection between the ATM keypad and the ATM processor (all within the secure ATM) an “unsecure communication link.” Therefore, a combination of *Chang*, *Merritt* and *Martin* would still not suggest to someone skilled in the art at the time of the invention transmitting two encrypted electronic checks over an unsecure communication link and comparing them. The prior art only shows transmitting a single encrypted check for comparison with an unencrypted version at a remote location. For this reason, Appellant submits that the present invention is not obvious in light of the prior art.

For the reasons given above, Applicants do not believe that any part of *Merritt*’s teaching or *Merritt*’s teaching taken as a whole can be said to suggest Claim 15, which includes receiving two separate copies of an “*encrypted*” “*electronic check*” over an “*unsecure communication link*,” one check coming from the payee’s bank and the other check coming from the payor’s bank, accompanied by a “*payment authorization*”, and “*comparing*” those “*encrypted*” checks, and then only successfully processing a transaction transferring funds between the two banks upon a successful match of the “*encrypted*” checks and receipt of the “*payment authorization*” from the payor’s bank.

Appellant further submits that the teachings of each of *Chang*, *Arnold*, *Rosen*, *Merritt* and *Martin*, individually or in combination, make no suggestion of performing the process of the present invention. The test for comparing references is what the references as a whole would have suggested to one of ordinary skill in the art. *In Re: Scheckler*, 168 USPQ 716 (CCPA 1971). The teaching or suggestion to make the claimed combination and the reasonable expectation of success must both be found in the prior art, not based on Applicants' disclosure. *In re Vaeck*, 947 F.2d 488, 20 USPQ 2d 1438 (Fed. Cir. 1991). The initial burden is on the Examiner to provide some suggestion of the desirability of doing what the inventor has done. ("To support the conclusion that the claimed invention is directed to obvious subject matter, either the references must expressly or implicitly suggest the claimed invention or the Examiner must present a convincing line of reasoning as to why the artisan would have found the claimed invention to have been obvious in light of the teachings of the references." *Ex parte Clapp*, 277 USPQ 972, 973 (Bd. Pat. App. & Inter. 1985)).

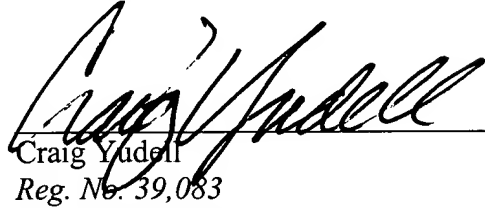
In this case, Appellant respectfully submits, even taking the references as a whole (as was suggested by the Examiner), there is no suggestion in the prior art such that the artisan would find obvious a system for comparing two "encrypted" checks or PINs to complete a financial transaction. The references do not teach or suggest a way to make the claimed combination or suggest a reasonable expectation of success. Further, given that *Merritt* teaches away from the present invention by teaching the comparison of a secure and unsecure PIN number, the Examiner has not presented a convincing line of reasoning as to why the present invention of comparing two encrypted checks would have been obvious to someone skilled in the art based on the teachings of *Chang*, *Arnold*, *Rosen*, *Merritt* and *Martin*. Consequently, Applicants respectfully submit that the rejection of Claim 15 as being obvious in light of the cited prior art should be reconsidered.

### SUMMARY

Appellant believes the foregoing arguments clearly demonstrate that *Chang* in view of *Arnold* and further in view of *Rosen* and further in view *Merritt* and further in view of *Martin* do not render claim 15 unpatentable under 35 U.S.C. § 103(a). Appellant has made a diligent effort to advance the prosecution of this application by pointing out with particularity how the claim as

presented is patentable over the prior art of record. A Notice of Allowance of the claim now pending in this application is respectfully requested.

Respectfully submitted,



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